

WHAT IS CLAIMED IS:

1. A method of managing loading in a beam pattern associated with a multi-beam antenna array, comprising:

receiving first information which indicates that a first beam of the beam
5 pattern is overloaded;

receiving second information which indicates that a user is located in an
area covered by a second beam which is adjacent to the first beam in the beam pattern;
and

in response to said first and second information, selecting a third beam of
10 the beam pattern for effectuating communication with the user.

2. The method of Claim 1, wherein the third beam has more available
communication capacity than the first beam.

15 3. The method of Claim 1, wherein the user causes more interference to
another user than said another user causes to the first-mentioned user.

4. The method of Claim 3, wherein the first-mentioned user is a user of one of a video service, a web browsing service, a file transfer service and a speech service.

5 5. The method of Claim 1, wherein the second beam spatially overlaps the first beam.

6. An apparatus for managing loading in a beam pattern associated with a multi-beam antenna array, comprising:

10 an input for receiving first information which indicates that a first beam of the beam pattern is overloaded, and for receiving second information which indicates that a user is located in an area covered by a second beam which is adjacent to the first beam in the beam pattern; and

15 a selector coupled to said input and responsive to said first and second information for selecting a third beam of the beam pattern for effectuating communication with the user.

7. The apparatus of Claim 6, wherein the third beam has more available communication capacity than the first beam.

8. The apparatus of Claim 6, wherein the user causes more interference to another user than said another user causes to the first-mentioned user.

9. The apparatus of Claim 8, wherein the user is a user of one of a video service, a web browsing service, a file transfer service and a speech service.

10. The apparatus of Claim 6, provided in one of a CDMA base station and a WCDMA base station.

11. The apparatus of Claim 6, wherein the multi-beam antenna array is a fixed beam (FB) array.

12. The apparatus of Claim 6, wherein the second beam spatially overlaps the first beam.

13. A method of managing loading in a beam pattern associated with a multi-
5 beam antenna array, comprising:

receiving information which indicates that a first beam of the beam pattern is overloaded and that a user is located in an area covered by the first beam; and

in response to said information, selecting for communication with the user a second beam of the beam pattern which is adjacent to the first beam in the beam
10 pattern.

14. The method of Claim 13, wherein the second beam has more available communication capacity than the first beam.

15. The method of Claim 13, wherein the user causes more interference to another user than said another user causes to the first-mentioned user.

16. The method of Claim 15, wherein the first-mentioned user is a user of one of a video service, a web browsing service, a file transfer service and a speech service.

5 17. The method of Claim 13, wherein the second beam spatially overlaps the first beam.

18. An apparatus for managing loading in a beam pattern associated with a multi-beam antenna array, comprising:

10 an input for receiving information which indicates that a first beam of the beam pattern is overloaded and that a user is located in an area covered by the first beam;
and

a selector coupled to said input and operable in response to said information to select for communication with the user a second beam of the beam pattern
15 which is adjacent to the first beam in the beam pattern.

19. The apparatus of Claim 18, wherein the second beam has more available communication capacity than the first beam.

20. The apparatus of Claim 18, wherein the user causes more interference to another user than said another user causes to the first-mentioned user.

21. The apparatus of Claim 20, wherein the user is a user of one of a video service, a web browsing service, a file transfer service and a speech service.

22. The apparatus of Claim 18, provided in one of a CDMA base station and a WCDMA base station.

23. The apparatus of Claim 18, wherein the multi-beam antenna array is a fixed beam (FB) array.

24. The apparatus of Claim 18, wherein the second beam spatially overlaps
the first beam.